Claims

1. A method of treating or preventing a peripheral nerve sheath tumor by administering to a mammal a therapeutically effective dose of a compound that modulates the biological activity of a gonadotropic steroid receptor.

2. The method of claim 1, wherein said peripheral nerve sheath tumor is prevented.

3. The method of claim 1, wherein said peripheral nerve sheath tumor is treated.

4. The method of claim 1, wherein said gonadotropic steroid receptor is a progesterone receptor.

5. The method of claim 1, wherein said gonatropic steroid receptor is an estrogen receptor.

6. The method of claim 1, wherein said gonatropic steroid receptor is an androgen receptor.

7. The method of claim 1, wherein said compound activates said biological activity of said gonatropic receptor.

8. The method of claim 1, wherein said compound inhibits said biological activity of said gonatropic receptor.

9. The method of claim 8, wherein said compound is selected from a group consisting of mifepristone, onapristone, lilipristone, Org 31710, Org 31806, tamoxifen, raloxifene, faslodex, TAS-108, droloxifen, ICI164384, atemestane, bicalutamide, flutamide, and nilutamide.

10. The method of claim 1, wherein said gonatropic steroid receptor is a progesterone receptor.

11. The method of claim 10, wherein said compound is selected from a group consisting of mifepristone, onapristone, lilipristone, Org 31710, and Org 31806.

12. The method of claim 11, wherein said compound is mifepristone.

13. The method of claim 1, wherein more than one gonatropic steroid receptor is modulated, said receptor selected from the group consisting of estrogen receptor, androgen receptor, and progesterone receptor.

14. The method of claim 13, wherein one of said gonatropic steroid receptor is the progesterone receptor.

15. The method of claim 1, further comprising a second therapeutic regimen.

16. The method of claim 15, wherein said second therapeutic regimen is tumor resection, chemotherapy, or radiotherapy.

17. The method of claim 1, wherein said compound is a small molecule antagonist, a neutralizing antibody, an antisense nucleic acid, or a double stranded interference ribonucleic acid (RNAi).

18. The method of claim 1, wherein said peripheral nerve sheath tumor is selected from a group consisting of neurofibromas, schwannomas, perineuriomas, malignant peripheral nerve sheath tumors, and Triton tumors.

19. The method of claim 18, wherein said peripheral nerve sheath tumor is a neurofibroma.

20. The method of claim 19, wherein said neurofibroma is a sporadic neurofibroma.

21. The method of claim 19, wherein said neurofibroma is associated with type-1 neurofibromatosis.

22. A method of monitoring the progression of a peripheral nerve sheath tumor, said method comprising measuring the amount of a gonadotropic steroid receptor mRNA or polypeptide expression in a sample from a mammal, wherein an increase or decrease in said gonadotropic steroid receptor mRNA or polypeptide expression in said sample relative to a control sample indicates a progression of a peripheral nerve sheath tumor or a propensity thereto in said mammal.

23. A method of determining a course of treatment of a mammal diagnosed as having a peripheral nerve sheath tumor, said method comprising the steps of:

a) providing a histological preparation of a peripheral nerve sheath tumor from said mammal; and

b) detecting the presence of a gonadotropic steroid receptor in said histological preparation, wherein the presence of said gonadotropic steroid receptor identifies said mammal as being a candidate for treatment with a compound that modulates the biological activity of a gonadotropic steroid receptor.

24. The method of claim 23, wherein said compound inhibits said gonatropic steroid receptor.

25. The method of claim 23, wherein said compound activates said gonatropic steroid receptor.

26. The method of claim 23, wherein said gonadotropic steroid receptor is the progesterone receptor.

27. A method for identifying a candidate compound for treating, reducing, or preventing a peripheral nerve sheath tumor in a mammal, said method comprising:

(a) contacting a cell expressing a gonatropic receptor gene with a candidate compound; and

(b) measuring the gene expression or protein activity of said gonatropic receptor in said cell, a candidate compound that modulates said expression or said activity, relative to expression or activity of said gonatropic receptor in a cell not contacted with said candidate compound, identifying said candidate compound as a candidate compound useful for treating or preventing a peripheral nerve sheath tumor in a mammal.